

REMARKS

Objection to the Drawings

Formal drawings are provided with this response (as “Replacement Sheets”) to address the objection to the drawings.

Rejections under 35 U.S.C. §103(a)

Claims 1-14 and 18-26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Melendez et al. (US Patent No. 6,374,845) in view of Gibney et al. (US Patent No. 5,656,313).

Claim 1 has been amended to recite a flow sensor and that the control system is

“further operable to compare the measured flow rate of the second fluid to an expected flow rate of the second fluid and to establish a scaling factor based on the comparison of the measured and expected flow rates of the second fluid, such that the control system is operable to adjust the electromagnetic force on the spool based on the temperature of the second fluid and on the scaling factor to substantially achieve the desired flow rate of the second fluid.”

Thus, the desired flow rate of the second fluid is achieved not just by measuring the temperature of the second fluid and correlating it to a desired flow rate, or by measuring the flow rate alone. Rather, measured and expected flow rates are compared to establish a scaling factor that is used in conjunction with the temperature measurement to adjust the spool. It is respectfully submitted that neither Melendez nor Gibney discloses the recited invention, and thus their combination cannot recreate, nor render obvious, the claimed invention. Applicant respectfully submits that Claim 1 is allowable.

This amendment and new Claim 28 discussed below are supported in the disclosure, for example at page 12, line 18 through page 13, line 7.

New Claim 28 depends from Claim 1, and further recites that the scaling factor is established “intermittently, and wherein the scaling factor is established during one or more relatively long flow cycles.” Applicant respectfully submits that this claim element further distinguishes the prior art.

Amended Claim 2 recites “wherein the control system remembers a setting of the electric current from a previous demand for the second fluid, and wherein the control system applies the remembered setting or holds the remembered setting for some time.” This claim was not specifically addressed in the Office Action, and Applicant respectfully submits that neither Melendez nor Gibney teaches or suggests such remembered settings. In particular, Gibney, at column 14, lines 39-52, discusses start-up settings of its systems, which may be recommended values for its drink specification. However, Gibney does not teach or suggest that settings should be based on settings from previous demand cycles. Therefore, for this additional reason, Applicant respectfully submits that Claim 2 is allowable.

Claim 3, which depends from Claim 2, recites “wherein the remembered setting is a last setting used during the previous demand for the second fluid.” This claim was not specifically addressed in the Office Action, and Applicant respectfully submits that neither Melendez nor Gibney teaches or suggests it. In particular, similar to that discussed above, Gibney does not teach or suggest remembered settings that are based on the last setting of a previous demand. Therefore, for this additional reason, Applicant respectfully submits that Claim 3 is allowable.

Claim 13, which depends from Claim 1, has been amended to recite that “the temperature sensor and the flow sensor are the same sensor.” It is submitted that neither Melendez nor Gibney teaches or suggests the recited language, and that Claim 13 is therefore allowable.

Furthermore, because Claims 4-12 and Claim 14 depend (directly or indirectly) from Claim 1, it is respectfully submitted that they too are allowable.

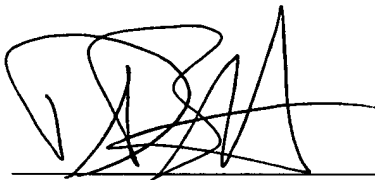
Independent Claim 18 has been amended to recite, among other things, that the control setting is established by “remembering the last control setting from a previous demand for flow and applying said last control setting from said previous demand for flow as the first control setting in a subsequent demand for flow, and then varying the control setting based on the sensed parameter of the second fluid.” This remembering of a previous control setting and the applying of it in a subsequent demand for flow is similar to the language used in originally submitted Claims 21 and 22 (now cancelled), which was not specifically addressed in the Office Action. Applicant respectfully submits that neither Melendez nor Gibney teaches or suggests it, and that Claim 18 is allowable. In particular, as discussed above, Gibney does not teach or suggest remembered settings from previous demands.

New Claim 27 relates to establishing a scaling factor, similar to that discussed above in connection with amended Claim 1. Thus, because neither Melendez nor Gibney teaches or suggests such a scaling factor, it is respectfully submitted that Claim 27 further distinguishes the prior art. It is respectfully submitted that Claim 27, and all the claims that depend from Claim 18, are also allowable because of their dependency from allowable Claim 18.

Based on the foregoing, Applicant respectfully requests allowance of all claims in this application. If there are any questions concerning this response, please call Dennis Braswell at the telephone number set forth below.

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